

Ex Parte Presentation



ET Docket No. 00-258 Spectrum for Third Generation (3G) Mobile Systems Re: Reallocation of UPCS

NEC



Agenda

- **Overview of NEC Wireless Applications**
- **Impact of Reallocation on Current UPCS Enterprise Users & Market**
- **Inability of UPCS to share Spectrum with 3G or MDS**
- **The Record with Respect to the UPCS Market**
- **Benefits of WINFORUM & UTStarcom Proposals**



NEC Wireless Applications



- **Highly scalable In-building, Campus, and Enterprise-wide Pico-Cell solution based on Japanese PHS private system**
 - **Wireless service on Elite Key System, NEAX 2000 & NEAX 2400 PBXs for 2 to 16,000 or more users**
 - **Integrated with telephone system for feature rich mobile capabilities & cooperative desktop solutions**
 - **“Wire-line” like voice quality service through relatively clear band and unique UPCS rules**
 - **Enterprise wide roaming capabilities for multi-site mobile users**



NEC Wireless Applications



- **Healthcare applications**
 - **UPCS allows wide variety of caregivers to deliver better and more efficient patient care**
- **Education applications**
 - **Safety and security concerns from recent events can be mitigated through teachers and aides having immediate access to communications on campus-wide basis**
- **Manufacturing, Warehousing, Retail, Hotels**
 - **Most businesses recognize that wireless connectivity enhances productivity and ROI**



Impact on Enterprise Users



- **Spectrum reallocation not practical for UPCS users or manufacturers**
 - Neither 3G nor MDS services can effectively utilize the UPCS band without causing interference to UPCS users
 - Renders current investment (hundreds of millions) by enterprises and equipment providers worthless
 - Results in picking winners and losers in market place, with overwhelming benefit to one supplier
 - With no alternative band for UPCS operation, disavows support for the “vital” benefits recognized in the original order establishing UPCS band



Spectrum Management Implications

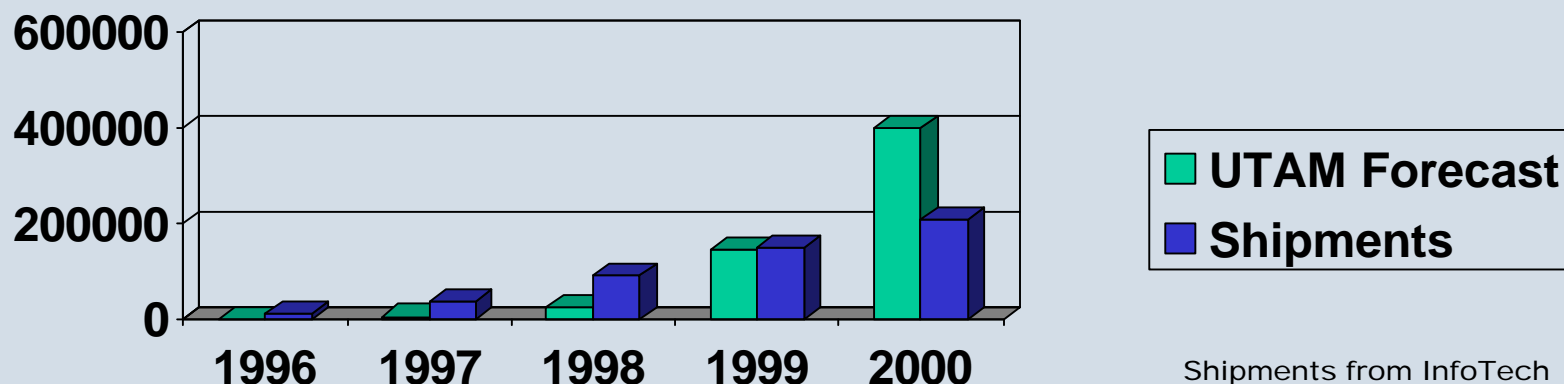


- **Reallocation of 1910-1930 MHz would create inefficient use of spectrum**
 - **Reallocation would eliminate UPCS as a wireless solution for enterprise users, thereby reducing competition**
 - **Unlike UPCS, high-powered MDS or TDD would cause harmful interference to PCS, requiring large guard bands (10 MHz) of unusable spectrum**
 - **Neither result is consistent with sound spectrum management**



UPCS Market

UPCS Handset Shipments (cumulative)



- **Original forecast submitted to FCC was met through 1999**
 - Initial growth impeded by delay in cost sharing rules
 - Low amount of ISOC bandwidth has made sales to high density users difficult
 - NEC shipments continued to grow through 2001 despite economic downturn



WINFORUM Proposal



- **Provides for additional 10 MHz for ISOC operation, as originally contemplated by FCC**
 - **Applications for high density user clusters in certain large, open environments with high traffic needs**
 - **e.g., Trading Floors, Purchasing and Customer Service departments**
 - **Supports voice, messaging, and multi-media applications**
 - **Additional bandwidth required to support current high quality voice, significant messaging volume, and multiple channel bonded multi-media applications (refer to PHS MoU web site – <http://www.phsmou.or.jp>)**



UTStarcom Proposal



- **Cooperative use of the 1910-1920 MHz UPCS band**
 - Offers benefit of higher utilization of this band, addressing expanded UPCS use & deployments for users in under-served community-based networks
 - Would bring into use globally available solutions at lower prices
 - Minor changes to UTStarcom proposal would allow for coordination with UPCS, PCS, and incumbent licensees



Summary

- **Urgent need to remove market doubts regarding UPCS future**
 - **Separate UPCS from 3G proceeding**
- **Adopt WINFORUM proposal to expand on applications available for Enterprise Mobility**
- **Adopt UTStarcom proposal with additional requirement to submit, in concert with UTAM, procedures for coordinating community wireless networks with incumbents and for participation in cost sharing for band clearing**